

Catalogue of American Amphibians and Reptiles.

McCrane, J.R. 2006. *Bolitoglossa longissima*.

***Bolitoglossa longissima* McCrane and Cruz**

Bolitoglossa longissima McCrane and Cruz 1996: 195. Type-locality, "along the trail to Pico La Picucha, Sierra de Agalta (14°58'N, 85°55'W), ca. 10 airline km NNW Catacamas, 1900 m elevation, Departamento de Olancho, Honduras." Holotype, Museum of Vertebrate Zoology, University of California, Berkeley (MVZ) 222552, an adult female, collected by G.A. Cruz, 15 August 1991 (examined by author).

B. [olitoglossa]. (Magnadigita) longissima: Parra-Olea et al. 2004:336.

• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** *Bolitoglossa longissima* is a moderately large salamander (SVL 45.7–48.2 mm, mean = 47.0 mm in two adult males, 51.0–61.1 mm, mean = 54.6±4.2 mm in five adult females) with a moderately long and broad head (head length/SVL 0.265–0.274 in adult males, 0.221–0.261 in adult females; head width/SVL 0.155–0.162 in adult males, 0.163–0.181 in adult females). The snout is truncate to broadly rounded in dorsal aspect and broadly rounded in lateral profile. The labial protuberances are well developed in both sexes, and are pronounced in adult males. Adult males have a distinct, oval-shaped mental gland cluster. The eyes are slightly protuberant and are narrowly visible beyond the margin of the jaw when viewed from below in males and are not or only narrowly visible from below in females. The postorbital groove is shallow and irregular and extends posteriorly from the eye before turning sharply ventrally to connect with the gular fold, and another groove proceeds sharply ventrally just posterior to the lower jaw and extends irregularly across the throat anterior to the gular fold. There is no sublingual fold. The maxillary teeth number 71–81 (76.0) in adult males, 70–76 (73.8±2.4) in adult females, and extend posteriorly to a level beyond the center of the orbit, and increase in number with increasing adult size. The vomerine teeth number 29–36 (32.5) in adult males, 29–36 (31.0±2.8) in adult females, and are in long, single, arched series that extend laterally to a level slightly beyond the medial border of the choanae. The premaxillary teeth number 2 in both adult males and 5–9 (7.4±1.5) in adult females. The premaxillary teeth are enlarged and pierce the lip in adult males and are not enlarged and are located posterior to the lip and in line with the maxillary series in all females. The costal grooves number 13. The tail is nearly rectangular in cross section anteriorly, becoming ovoid for about the distal one-third of its length. The tail is strongly constricted basally and relatively long (tail length/SVL 0.768–0.888 in adult males, 0.809–0.963 in four adult females). The limbs are relatively slender and long (hind limb length/SVL 0.319–0.324 in adult males, 0.302–0.319 in adult females). The adpressed



Figure 1. Adult female (USNM 523283) of *Bolitoglossa longissima* (photograph by the author).

limbs well overlap in both sexes. The feet are moderately large (hind foot width/SVL 0.123–0.129 in adult males, 0.118–0.125 in adult females). The digits are slightly webbed, with from two to slightly more than two segments on both sides of Toe III on the forelimbs and of Toe III between Toes III–IV on the hind limbs free of webbing. The protruding toe tips are bluntly rounded and all toe tips have well-developed subdigital pads. The relative length of the toes on the forelimbs is I<IV<II<III, whereas that on the hind limbs is I<V<II<IV<III. A fairly distinct to poorly evident postiliac gland cluster is present. Males have cloacal papillae and females have cloacal folds (the above from data taken by McCrane, most of which was published in McCrane and Cruz 1996 and McCrane and Wilson 2002).

McCrane and Wilson (2002), using Smithe (1975–1981) for color names (capitalized) and color codes (in parentheses), described the color in life as "a female (USNM 523283): dorsal and lateral surfaces of body Dark Brownish Olive (129) with Sepia (119) costal grooves laterally; dorsal and lateral surfaces of head Burnt Sienna (132); dorsal and lateral surfaces of tail Brick Red (132A) with small Sepia (119) spots laterally; dorsal surfaces of limbs Verona Brown (223B); ventral surface of body brown-gray; chin pale yellowish brown; subcaudal surface pale yellowish brown; iris gold with rust-red reticulations. Color in life of another female (USNM 530571): dorsal surfaces of head, body, and limbs Amber (36) with small Sepia (219) spots; dorsal surface of tail Tawny (38) with Sepia (219) spots; costal grooves with Sepia (219) pigment laterally; ventral surface of body Burnt Umber (22), that of throat Amber (36); subcaudal surface Amber (36) with Sepia (219) mottling. A juvenile (USNM 523285) was similar to USNM 523283, except that the dorsal and lateral surfaces of the tail were Orange-Rufous (132C). Color in life of another juvenile (USNM 523284): dorsal and lateral surfaces of head, body, and tail Orange-Rufous (132C) with sparse darker flecking and Sepia (119) costal grooves laterally; dorsal surfaces of limbs same as head, body, and tail, except feet slightly paler; ventral and subcaudal surfaces Orange-Rufous (132C) with numerous gray flecking; iris gold with rust-red reticulations."

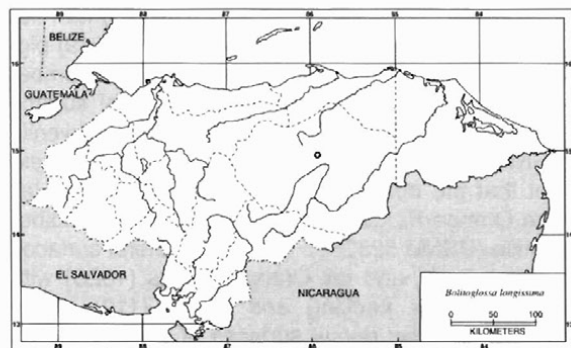
In alcohol, all dorsal surfaces are medium brown to dark brown, usually without distinctive markings (occasional specimens have small dark brown spots dor-

sally). The lateral surface of the body is slightly paler brown than the dorsum, except that each costal groove has a heavy concentration of darker brown pigment for a portion of its surface. The ventral and subcaudal surfaces are pale brown and heavily flecked with dark brown.

• **DIAGNOSIS.** *Bolitoglossa longissima* is a member of the *B. dunni* species group of the subgenus *Magnadigita* Taylor 1944 (Parra-Olea et al. 2004). Eleven described species were included in this species group by Parra-Olea et al. (2004) and two more species have been subsequently described (Greenbaum 2004, McCranie et al. 2005). *Bolitoglossa longissima* can be distinguished from all other species in this group by the combination of its long limbs (hind limb length/SVL 0.319–0.324 in males, 0.302–0.319 in females), the absence of pale markings on the dorsal surfaces, its reduced webbing (two to slightly over two segments on Toe III on the forelimbs and of Toe III between Toes III–IV on the hind limbs free of webbing), and its high number of maxillary ($x = 76.0$ in adult males, 73.8 in adult females) and vomerine ($x = 32.5$ in adult males, 31.0 in adult females). The species also differs from the other species in the group (except *B. oresbia*, in which data is lacking) in mitochondrial DNA sequences (Parra-Olea et al. 2004).

• **DESCRIPTIONS.** Detailed descriptions of external morphology are in McCranie and Cruz (1996), McCranie and Wilson (2002), and McCranie and Castañeda (2007). McCranie and Cruz (1996) briefly described some osteological features.

• **ILLUSTRATIONS.** Color photographs are in McCranie and Wilson (2002) and McCranie and Castañeda (2007). A black and white photograph of a preserved specimen is in McCranie and Cruz (1996). A line drawing of the phalangeal structure of a hind foot is in McCranie and Cruz (1996). Photographs of the elfin forest where this species occurs are in McCranie and Wilson (2002) and McCranie and Castañeda (2007).



Map. Distribution of *Bolitoglossa longissima*. The circle denotes the type and only known locality.

• **DISTRIBUTION.** *Bolitoglossa longissima* is known only from Pico La Picucha in the Sierra de Agalta to the north of Catacamas, Olancho, Hon-

duras. The known elevational range is 1840–2240 m in primary cloud forest (Lower Montane Wet Forest formation of Holdridge 1967). The species occurs in tall forest at the base of the ridge to Pico La Picucha as well as in the elfin forest on the ridge.

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** What little is known about the natural history of this species was discussed by McCranie and Cruz (1996), McCranie and Wilson (2002), and McCranie and Castañeda (2007), and its distribution by Honduran physiographic and ecogeographic regions was presented by McCranie and Wilson (2002) and Wilson et al. (2001). Wilson and McCranie (2003) discussed its status as an “indicator species” used to measure environmental stability and these authors considered the species to be highly vulnerable. Wilson and McCranie (2004a) discussed its conservation status and also considered the species to be highly vulnerable, although it does have stable populations (McCranie and Wilson 2006). Wilson and McCranie (2004b) discussed its distribution within the Honduran cloud forests and McCranie (2007) listed the museum specimen numbers. Parra-Olea et al. (2004) studied its mitochondrial DNA and presented a phylogenetic analysis of its relationships among the genus, placing it in the *dunni* species group. Parra-Olea et al. (2004) also placed the species in the subgenus *Magnadigita* Taylor (1944). The species was included in diagnoses of new species of *Bolitoglossa* by Greenbaum (2004), McCranie and Köhler (1999), McCranie and Wilson (1997), and McCranie et al. (2005). Greenbaum (2004) also reproduced the figure of the “*Magnadigita*” clade previously published in Parra-Olea et al. (2004). McCranie et al. (2005) included a map showing the known localities of this species and the remaining members of the *B. dunni* group in Honduras. Duellman (2001) listed the species as occurring in the Eastern Nuclear Highlands of Middle America and Campbell (1999) included the species in an addendum to his discussion of distributional patterns of amphibians in Middle America. Larson et al. (2003) listed the species as a member of the subfamily Plethodontinae, tribe Bolitoglossini, in the genus *Bolitoglossa*, and also included it in the *B. dunni* group. Duellman and Schlager (2003) included it in their valid species list. Rodríguez-Robles et al. (2003) listed the holotype in their MVZ type specimen catalogue.

• **ETYMOLOGY.** The name *longissima* is from the Latin “*longissimus*” (longest), in reference to the species having the longest limbs among the species of the *B. dunni* group.

• **COMMENT.** McCranie and Castañeda (2007) used the common name Salamandra del Pico Picucha for this species. Museum acronyms follow Leviton et al. (1985).

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